

AMENDMENTS TO THE ABSTRACT

Please replace the Abstract in its entirety with the following amended Abstract:

A bi-directional shift register circuit comprising, a plurality of shift registers ~~register stages~~, each having an input and an output terminal, and a bi-directional shift controller circuit associated with each of said shift registers ~~register stages~~ is disclosed. The bi-directional shift controller circuit comprises a first input connected to a output terminal of a first shift register stage ~~output terminal~~ and a second input connected to a output terminal of a second shift register stage ~~output terminal~~. ~~means~~ Means to apply a first and a second control voltage, wherein said first and second control voltage are different, and a combinatorial circuit responsive to said first and second control voltages to apply an indication of an input received from either said first shift register or said second shift register to said corresponding shift register input terminal. The combinatorial circuit configuration is that of a NOR gate or a NAND gate.